



Examples of Uses of Data from NCHS

Guiding National Policy

Health Insurance Coverage - NCHS provides the most current and complete national and state-specific (for the largest states) data available to track health insurance coverage. Three fundamental measures are obtained: persons who currently lack coverage; persons uninsured at any time in the previous year; and persons uninsured for more than a year. In 2009, 17.5 percent of the nonelderly population currently lacked health insurance coverage. For the same time period, 8.2 percent of children under 18 had no health insurance coverage – a decrease over 1997 when 13.9 percent were not covered. Estimates for enrollment in high deductible health plans and consumer-directed health plans, as well as estimates of participation in flexible spending account arrangements for medical expenses, are also available.

Disparities in Health - NCHS data have long documented disparities in life expectancy, infant mortality, a variety of risk factors, health insurance coverage, access to care, and utilization of services including screening tests, and diagnostic and therapeutic procedures - leading HHS to identify health disparities as a major public health problem and to develop national goals to reduce racial, ethnic, and other disparities in access to and quality of health care, as well as health outcomes.

Nutrition - Nutrition data provide information on Americans' dietary intakes and behaviors to inform nutrition policy and ensure a nutritious food supply. NCHS data are used to recommend and evaluate food fortification decisions, develop and evaluate the Dietary Guidelines for Americans, and help set the recommended intake levels for vitamins, minerals, and other nutrients. The data document increases in caloric intake for both men and women - primarily due to higher carbohydrate intake - between the early 1970s and recent years, and show that most Americans consume more than double the amount of their daily recommended level of sodium.

Immunizations - NCHS data are used to monitor compliance with recommended practices such as recommendations for influenza vaccination and the timing of childhood immunizations. Data collection also includes testing for immunity to vaccine-preventable diseases such as measles, rubella, tetanus, and diphtheria, and the resulting data contribute to improvements in immunization policies that protect society as a whole and target groups at special risk.

Exposure to Environmental Chemicals - NCHS data have contributed to our understanding of exposure to lead and secondhand smoke, which continue to decline, and blood mercury levels in women of child-bearing age and young children. Using NCHS data, CDC assesses the exposure of the U.S. population to a wide range of environmental chemicals.

Monitoring Health Status and Behaviors

Birth Data - NCHS data provide a wealth of information on health and demographic trends related to childbirth including trends in nonmarital births and births to teens. The 2008 data show a decline in total births of almost 2 percent from the all-time high in 2007. The teen birth rate fell 2 percent and birth rates for women in their 20s and 30s also fell; the rates increased for women in their 40s. Although the birth rate for unmarried women declined, the number and percentage of births to unmarried women continued to rise. Data are also available to monitor higher risk births. In 2008, the preterm birth rate declined to 12.3 percent; the low birthweight rate was 8.2 percent, unchanged from 2007.

Teen Pregnancy - NCHS data monitor trends in teen pregnancy rates. The latest estimates show a decline of 40 percent from the 1990 peak, to 71 pregnancies per 1,000 teens aged 15-19 in 2005 (data are not yet available to extend the pregnancy rates through 2008, to parallel the birth data). U.S. teenage pregnancy rates are still the highest among industrialized nations.

Growth Charts - NCHS data are used to create the pediatric growth charts used by pediatricians and parents to monitor children's growth. These charts are available in electronic form directly from the CDC website, and are also repackaged by private sector entities and distributed widely to physicians' offices.

Obesity - NCHS data illustrate that the percentage of obese Americans - who are at elevated risk of a variety of health problems - has increased in spite of attempts to address this problem. Between 1980 and 2000 the percent of adults classified as obese doubled - from 15 percent to 31 percent. In 2007-08, 35 percent of adults were obese. The data also show that 21 percent of children aged 6 - 11 and 19 percent of adolescents aged 12 - 19 were obese in 2007-08.

Cholesterol and Hypertension - NCHS data called attention to these health problems decades ago. After public health intervention, there were declines in the percent of adults with high serum cholesterol, as well as declines in mortality from heart disease and stroke. After dramatic reductions in hypertension - down to 24 percent of adults in 1988-94 - more recent data indicate a reversal in this trend. In 2007-08, 30 percent of the adult population had hypertension.

Oral Health - Oral health has improved significantly for most Americans since the 1990s. The prevalence of tooth decay in permanent teeth is down for children, teens, and adults, although decay in baby teeth increased for boys 2 - 8 years old. There is more use of protective dental sealants and less gum disease, and more seniors are retaining their natural teeth.

Smoking - NCHS data have chronicled adult smoking levels since 1964 - the year the first Surgeon General's report on smoking was released. The data show steady declines from 1965, when over 40 percent of adults smoked, until 1990 when about 25 percent of adults smoked. Smoking rates remained at 25 percent through much of the 1990s and modest declines have occurred since the beginning of the current decade. In 2009 about 21 percent of adults were current smokers.

Asthma and Allergies - Tracking different aspects of asthma - prevalence, health care utilization, and mortality - reveals how well the Nation is addressing this disease and can lead to better targeting of interventions. NCHS data illustrate the disparate impact of asthma, with blacks experiencing more ED visits, hospitalizations, and deaths due to asthma than whites. Data track the prevalence of allergies, including food allergies, among children - about 4.5 percent of children were reported to have a food or digestive allergy in 2008.

Injuries - Injuries inflict a heavy toll on Americans. NCHS data document that unintentional injuries were the leading cause of death in 2007 for those 1 - 44 years of age and the 5th leading cause of death for all ages. In 2007, 68 percent of injury deaths were unintentional, while 19 percent were suicides and 10 percent were homicides. Motor vehicles caused the most injury deaths, followed by poisoning, firearms, falls, and suffocation. About 30 percent of ED visits were injury related in 2007.

Disabilities - International efforts are underway to improve our understanding of disabilities and the impact of activity limitations on participation in society. NCHS obtains data to assess basic actions functioning (for example, functioning in movement, or sensory, emotional, or cognitive functioning) and complex activity functioning (limitations in participation in social role activities such as working or maintaining a household). In 2007, 29 percent of adults 18 years and over reported at least one basic actions difficulty; 15 percent reported at least one complex activity limitation.

Children's Emotional Health - NCHS data are used to monitor children's emotional and behavioral health. Among children 4 - 17 years of age, about 9 percent had ADHD and about 5 percent had definite or

severe difficulties in emotions, concentration, behavior, or being able to get along with others in 2008. Parents report that 9 percent of school-aged children (6 - 17 year-olds) receive special education services; about 36 percent of these children received special education services because of an emotional or behavioral problem.

Assessing the Health Care System

Health Care Delivery System - Our health care system is changing: Americans are receiving more medications, getting more care in physician offices and other ambulatory settings and less care as hospital inpatients, and facing more crowding in EDs. Fewer office-based physicians are accepting new patients who have no insurance, worker's compensation, or Medicaid. With the aging of the population, there is an increased demand for long-term care, especially community-based home health and hospice care. Understanding these changing patterns is integral to national planning efforts, including health care reform.

Health Information Technology - NCHS data track changes in the use of electronic medical records and other health information technologies, the adoption of which has been promoted through recent legislation. Data show that hospital EDs are more likely to use electronic medical records than home and hospice care agencies or physicians in office-based practices. Among physicians in office-based practices, 42 percent used some type of electronic medical record system in 2008, compared with 18 percent in 2001.

Quality and Patient Safety - NCHS data systems offer a wealth of opportunities to examine quality and patient safety issues, including over- or under- or misuse of procedures, complications of care, preventable hospitalizations, falls and pressure ulcers in nursing homes, and deaths due to medical error. Concern about antimicrobial resistance and over-prescribing of antibiotics to children led to educational efforts regarding appropriate use of antibiotics in the mid-1990s. For children less than 15 years of age, there was a 20 percent decline in the rate of antibiotics prescribed per physician office visit between 1997 and 2007, suggesting that physicians have responded to these initiatives.

Emergency Care - NCHS data are used to monitor the emergency care system and illustrate the increasing demand for emergency care, often cited as a cause of ED crowding. ED visits increased from 95 million in 1997 to 117 million in 2007; during the same period the number of hospital EDs decreased from 4,005 to 3,829. In 2007, 23 percent of patients waited one hour or more to see a physician after their arrival at the ED.

Complementary and Alternative Medicine - NCHS data represent the most comprehensive and reliable data on complementary and alternative medicine use in the U.S., revealing that 38 percent of adults and about 12 percent of children under 18 used some form of alternative medicine in 2007.

Shaping Research Priorities

Older Americans - The aging of the population, particularly increases in those 85 and older, will lead to an increase in the number of people who need long-term care. NCHS data on recipients document increased use of home health and hospice care between 2000 and 2007. NCHS provides data to examine quality of care, disparities, resource use such as staffing and charges, care management, and use of technology, all ever-increasingly important research, policy, and provider issues. Data are also available on significant emerging topics, such as electronic medical records, post-acute care, advance directives, medications, and transitions between care settings.

Women's Health - NCHS data are used to monitor the health of American women in all stages of their lives, with a particular focus on the childbearing years. Data are obtained to monitor access to contraceptive drugs and procedures, and women's experience with side effects - an important component of reproductive health. Data on cesareans are also monitored, revealing the highest rate ever reported in the U.S. in 2008 - almost one-third of all births. Data on preventive services such as mammograms show that in 2008 about 71 percent of women aged 50 and older reported having had a mammogram in the last two years. NCHS data also document the prevalence of HPV infection - one in four women is infected with HPV.

Infant and Fetal Mortality - After decades of decline, the infant mortality rate did not decrease from 2000 to 2005. The rate fell slightly in 2006, but was essentially unchanged in 2007 (6.75 deaths per 1,000 live births). In addition to monitoring trends, NCHS data are used to describe differentials in rates. For example, infants born to black mothers are at much higher risk of infant mortality. NCHS also publishes data on fetal deaths (stillbirths).

Life Expectancy and Causes of Death - Drawing on data from state vital records, NCHS monitors trends in life expectancy, death rates, and causes of death, documenting the dramatic improvements in life expectancy in the past century. In 2007, Americans experienced the longest life expectancy in U.S. history - 77.9 years (75.4 years for men and 80.4 years for women). The 10 leading causes of death account for about 77 percent of deaths in the U.S. - heart disease, cancer, and stroke remained the leading causes of death in 2007.

Who Uses NCHS Data?

Congress and other policymakers - to track major initiatives including health care reform, set priorities for prevention and research programs, and evaluate outcomes.

Epidemiologists, biomedical and health services researchers - to understand trends in multiple aspects of health and health care, the relationship of observed risk factors to health outcomes, and the use of health services.

Businesses - to support health-related activities of pharmaceutical and food manufacturers, market research firms, consulting firms, and trade associations.

Public health professionals - to track preventable illnesses and functional limitations and evaluate the impact of intervention programs.

Media and advocacy groups - to obtain background information and raise awareness of issues such as heart disease, cancer, diabetes, child nutrition, Alzheimer's disease, and health disparities.

Individual physicians - to evaluate health and risk factors of their patients (for example, reference standards and norms for conditions such as cholesterol, body weight, and blood pressure, and reference growth charts for children).

Actuaries - to gauge the health of the Social Security and Medicare trust funds and set premiums for health and life insurance.

Access to NCHS Data

- Published reports - in print and on website.
- Website-only data releases of timely information on important health issues.
- Public use data files for analysis by researchers.
- Pre-tabulated tables with state-level data on issues of special interest, such as births and deaths.
- Interactive data warehouses including "VitalStats" and "Health Data Interactive," containing national and state data on a wide variety of health topics.
- Research Data Centers - secure access to detailed data.